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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,645	11/10/2003	Jeffrey L. McElray SR.		6138

23361 7590 01/22/2008
ABB INC.
LEGAL DEPARTMENT-4U6
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EXAMINER

WILLOUGHBY, TERRENCE RONIQUE

ART UNIT	PAPER NUMBER
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2836

MAIL DATE	DELIVERY MODE
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01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/705,645

Applicant(s)

MCELRAY ET AL.

Examiner

Terrence R. Willoughby

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on September 31, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8, 10, 13, 15-17, 19, 36-40, 42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8, 10, 13, 15-17, 19, 36-40, 42 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's amendment filed on September 31, 2007 has been entered. Accordingly, Claims 1, 8, 15, 19, and 36 have been amended and Claim 4-5, 7, 9, 11-12, 14, 18, 20-35 and 41 has been cancelled. No new claims have been added. Claims 1-3, 6, 8, 10, 13, 15-17, 19, 36-40 and 42-43 remain pending in this application. It also included remarks/arguments.

Claim Objections

Claim 36 objection is withdrawn based on the amendment and remarks filed.

Double Patenting

The Double Patenting rejection has been withdrawn based on the Terminal Disclaimer Filed on 10/31/07.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 8, 10, 13, 15-17, 19, 36-37, 39 and 42-43 are rejected under 35 U.S.C. 102(b) as being unpatentable by Buell (US 5,768,079).

Regarding claims 1 and 15, Buell discloses a method for controlling a recloser for an electrical power line comprising:

determining a protective setting group, the protection setting group having at least one associated variable, wherein the at least one associated variable comprises one of a time of day, day of week, and month of year (col. 3, ll. 19-29 and col. 4, ll. 17-37). The examiner interprets the "normal, daily and/or seasonal" fluctuations as an associated variable comprising one of a time of day, day of week, and month of year based on the user adjustable time constant (T_c) in which the controller can distinguish gradual changes in the load current (i.e. changes caused by daily or seasonal fluctuations wherein the adjustable time constant (T_c) represents the seconds or days.

determining a present condition of the at least one associated variable (col. 4, ll. 17-37). The examiner interprets the present or prevailing conditions as the adjustable time constant (T_c) that is programmed by a user which presents the seconds or days at which the controller can distinguish gradual changes in the load currents (i.e. changes caused by daily or seasonal fluctuations), from sudden more significant fluctuations caused by various overcurrent fault conditions.

determining a behavior of function for the recloser based on the protective device operations and the present conditions (col.3, ll. 47-60 and col. 7, ll. 17-25 and ll. 41-47);
and

adaptively setting the recloser to function in accordance with the behavior function (col. 3, ll. 47-60 and col. 7, ll. 17-25 and ll. 41-47). The examiner interprets the behavior functions as the various protection schemes in which the adaptive controller

Art Unit: 2836

can operate, such as a single or three phase tripping scheme and as well as in a fuse saving or fuse clearing mode based the variable time current curve (TCC) programmed by the user to present the time (s) at which the recloser opens or closes when a fault condition is present. This variable time current curve (TCC) would be set to protect or open inline fuses in addition to the reclosers.

Regarding claims 2 and 16, Buell discloses the method according to claims 1 and 15, further comprising continuously monitoring the present condition and changing the behavior function responsive to the monitoring (col. 5, ll. 1-20 and col. 3, ll. 50-60).

Regarding claims 3 and 17, Buell discloses the method according to claims 2 and 16, wherein monitoring the present condition comprises monitoring at predetermined intervals (col. 5, ll. 1-20 and col. 6, ll. 40-43 and Fig. 2).

Regarding claims 6 and 19, Buell discloses all the limitations recited above according to claims 1 and 15.

Regarding claim 8, Buell discloses a recloser control system for an electrical power line, comprising all the limitations recited above, and further

- a recloser (col. 1, ll. 30-49);

- a memory (col.5, ll. 46-47); and

- a recloser controller coupled to the recloser and the memory (col.5, ll. 46-47).

Regarding claim 10, Buell discloses the recloser control system according to claim 8, wherein the recloser controller comprises the memory (col. 5, ll. 46-47).

Regarding claim 13, Buell discloses all the limitations recited above according to claims 1 and 15.

Regarding claim 36, Buell discloses all the limitations recited above according to claim 8.

Regarding claim 37, Buell discloses all the limitations recited above in claims 1 and 15.

Regarding claim 39, Buell discloses all the limitations recited above in claims 1 and 15.

Regarding claim 42, Buell discloses all the limitations recited above in claims 1 and 15.

Regarding claim 43, Buell discloses all the limitations recited above in claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buell (US 5,768,079).

Regarding claim 38, Buell discloses the recloser control system of claim 37, except for the particularly time of day which is between 8:00 AM and 5:00 PM and the

Art Unit: 2836

day of week is one of Monday, Tuesday, Wednesday, Thursday and Friday, then the second one of the control schemes is selected.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the workable variable range i.e. (time and day of the week) for the recloser to adaptively open and close based on the desired settings and control schemes programmed under the control of an operator (i.e. the adjustable time constant (T_c) which represents the seconds and days of the application) to avoid unnecessarily interrupting service (col. 2, ll. 10-23), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 40, Buell discloses the recloser control system of claim 39, except for the particular month comprising one of which is April, May, June, July, August and September, then the second one of the control schemes is selected.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the workable variable range i.e. (months of the year) for the recloser to adaptively open and close based on the desired settings and control schemes programmed under the control of an operator (i.e. the adjustable time constant (T_c) which represents the seconds and days of the application) to avoid unnecessarily interrupting service (col. 2, ll. 10-23), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

Applicant arguments with respect to Claims 1-3, 6, 8, 10, 13, 15-17, 19, 36-40 and 42-43 filed on September 31, 2207 have been fully considered but they are not persuasive.

Applicant argues that Buell does not teach or suggest determining the present condition of at least one of the time of day, day of week or month of year. However, the Examiner respectfully disagrees with the applicant assessment. Buell discloses a method for adaptively protecting power distribution equipment. A universal microprocessor-based recloser controller implements the adaptive fault protection schemes such as single or three-phase protection modes (col. 3, ll. 50-60) as well as other protection schemes including inline fuses (col. 7, ll. 1-23 and ll. 41-47) unlike traditional (i.e. absolute/fixed) protection schemes, more importantly this controller is capable of distinguishing between gradual changes in load current, due to normal, daily and/or seasonal fluctuations versus sudden, more signification fluctuations due to various overcurrent fault conditions (co. 3, ll. 19-28). Normal, daily and/or seasonal fluctuations is understood to be a time of day, day of week or month of the year (***emphasis added***). Secondly, Buell controller establishes an adaptive Ground Offset Vector (GOV). The GOV tracks the value of a ground current vector (GCV) which reflects the relative balance or imbalance between the three single phase current vectors (col. 3, ll. 63-67) in accordance with a user adjustable time constant (T_c). By periodically comparing the value of the GOV and the value of the GCV, the controller can distinguish gradual changes in load current (i.e. changes caused by daily or

Art Unit: 2836

seasonal fluctuations). Finally, the time required for the GOV to approximate the value of the GCV is a direct function of the (T_c), which is programmed to represent the seconds or days (**emphasis added**) depending on the application (col. 3, ll. 63 thru col. 4, ll. 1-39).

Applicant argues that Buell cannot, for example teach "determining a behavior function for the recloser based on the protection setting group and the present condition", because no present condition of the time of day (ex. 5:00 pm), day of the week (ex. Tuesday) or is determined in the teachings of Buell. However, the Examiner respectfully disagrees with the applicant assessment. Buell further, teaches determining a behaving function for the recloser (i.e. the various protection modes in which the controller can adaptive perform (col. 3, ll. 47-60). Secondly, the controller can distinguish gradual changes in load current (i.e. changes caused by daily or seasonal fluctuations) and most importantly, the time required for the GOV to approximate the value of the GCV is a direct function of the (T_c), which is programmed by a user to represent the seconds or days (**emphasis added**) depending on the application. The protection setting group is understood to be a set of instructions performed by a user or technician operator (col. 3, ll. 63 thru col. 4, ll. 1-39). The present or prevailing conditions is the adjustable time constant (T_c) that is programmed by the user which presents the seconds or days at which the controller can distinguish gradual changes in the load currents (i.e. changes caused by daily or seasonal fluctuations).

Applicant argues that Buell "does not disclose determining a fuse saving mode or fuse clearing mode based on the protection setting group and the present conditions"

Art Unit: 2836

however, the Examiner respectfully disagrees with the applicant assessment. Buell discloses additional protection schemes which include inline fuses protection. Further, Buell discloses a time current curve (TCC) in Figure 2, and the operation of the controller performing these various protection schemes based on the variable time current curve programmed by a user which represent the time at which the recloser opens or closes when a fault condition is present. This variable time constant would be set to protect or open inline fuses in addition to the reclosers (col. 6, ll. 66 thru col. 7, ll. 1-23 and ll. 41-47). Therefore, the controller performs a fuse saving and fuse clearing mode.

Finally, the Examiner has pointed to specific teachings in the Buell reference wherein the time of day, day of week or week or month of the year is monitored and wherein a behavior function is determined based on the time of day, day of week or month of year. As for actual time of day (i.e. 8:00AM and 5:00pm and the day of the week being one of Monday, Tuesday, Wednesday....) disclosed in claim 38 and the actual month of the year (i.e. April, May, June,) in claim 40, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the workable variable ranges i.e. (the particularly time of day and day of the week or month of the year) for the recloser controller to adaptively open and close based on the desired settings and control schemes programmed under the control of an operator/user (i.e. the adjustable time constant (T_c) which represents the seconds and days of the application) to avoid unnecessarily interrupting service (col. 2, ll. 10-23), since it has

Art Unit: 2836

been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Willoughby whose telephone number is 571-272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2836

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRW
1/14/08


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